

IN THE CLAIMS:

1. (Canceled)

2. (Currently Amended) The humidity sensor as claimed in claim + 4, wherein the lower electrode or the upper electrode predominantly contains platinum.

3. (Currently Amended) The humidity sensor as claimed in claim + 4, wherein the lower electrode comprises a porous body.

4. (Currently Amended) A humidity sensor comprising:

an insulating substrate;

a lower electrode, a moisture sensitive layer and an upper electrode successively formed on the insulating substrate; and

~~The humidity sensor as claimed in claim + comprising~~ a heater provided in the insulating substrate,

wherein the lower electrode comprises a noble metal, the upper electrode comprises a noble metal porous body, and the upper electrode is joined to the moisture sensitive layer and a portion of the insulating substrate.

5. (Currently Amended) The humidity sensor as claimed in claim 4, comprising a temperature measurement resistor provided in the insulating substrate.

6. (Original) The humidity sensor as claimed in claim 4, wherein the heater is located directly below the moisture sensitive layer.

B1
could
7. (Original) The humidity sensor as claimed in claim 5, wherein the temperature measurement resistor is located directly below the moisture sensitive layer.

8. (Currently Amended) A humidity sensor comprising:

an insulating substrate; and

a lower electrode, a moisture sensitive layer and an upper electrode successively formed on the insulating substrate,

wherein the lower electrode comprises a noble metal, the upper electrode comprises a noble metal porous body, and the upper electrode is joined to the moisture sensitive layer and a portion of the insulating substrate, and

wherein the ~~The humidity sensor is as claimed in claim 1,~~ adapted for measuring humidity in an atmosphere containing a very small amount of oxygen and containing a reducing gas.

9. (Currently Amended) A humidity sensor comprising:

an insulating substrate; and

a lower electrode, a moisture sensitive layer and an upper electrode successively formed on the insulating substrate,

wherein the lower electrode comprises a noble metal, the upper electrode comprises a noble metal porous body, and the upper electrode is joined to the moisture sensitive layer and a portion of the insulating substrate, and

A humidity sensor according to claim 1, wherein a size of pores in the upper electrode is 0.5-20 μm .

10. (Currently Amended) A humidity sensor comprising:

an insulating substrate; and

a lower electrode, a moisture sensitive layer and an upper electrode successively formed on the insulating substrate,

wherein the lower electrode comprises a noble metal, the upper electrode comprises a noble metal porous body, and the upper electrode is joined to the moisture sensitive layer and a portion of the insulating substrate, and

Amendment Under 37 C.F.R. § 1.116
U.S. Application No.: 09/971,711

~~A humidity sensor according to claim 3~~, wherein a size of pores in the lower electrode is 0.5-20 μm .

11. (Currently Amended) A humidity sensor according to claim 4, wherein a size of pores in the moisture sensitive layer is 0.05-0.2 μm .

12. (Currently Amended) A humidity sensor comprising:

an insulating substrate; and

a lower electrode, a moisture sensitive layer and an upper electrode successively formed on the insulating substrate,

wherein the lower electrode comprises a noble metal, the upper electrode comprises a noble metal porous body, and the upper electrode is joined to the moisture sensitive layer and a portion of the insulating substrate, and

~~A humidity sensor according to claim 1~~, wherein particles of ceramic are incorporated in an amount of 1-20 wt% into the upper electrode.

13. (Currently Amended) A humidity sensor comprising:

an insulating substrate; and

Amendment Under 37 C.F.R. § 1.116
U.S. Application No.: 09/971,711

a lower electrode, a moisture sensitive layer and an upper electrode successively formed on the insulating substrate,

B1
end
wherein the lower electrode comprises a noble metal, the upper electrode comprises a noble metal porous body, and the upper electrode is joined to the moisture sensitive layer and a portion of the insulating substrate, and

~~A humidity sensor according to claim 1,~~ wherein particles of ceramic are incorporated in an amount of 1-20 wt% into the lower electrode.
